

Patent Claims:

1. Sealing system for the interspace in the transition region between two well pipes of different diameters, in particular an upper supporting pipe of larger diameter with a lower filter pipe (2) of smaller diameter, and a mounting tool (1) for producing the sealing connection, characterized by the following features:
- a) a holding socket (3), which can be fixed firmly such that it cannot rotate on the free upper end of the lower filter pipe (2) of smaller diameter and has at least one locking pin (4) which projects out of its circumferential surface in the radial direction;
 - b) a sealing sleeve (6) which can be pushed onto the holding socket (3) and has a locking groove (7) which opens at its lower edge, is used to hold the locking pin (4) and which has a clamping section (7a) which rises in the clockwise direction and an axial latching section (7b) which adjoins the latter;
 - c) a tool guide (10) in the form of a pipe connecting piece which is aligned axially with the sealing sleeve (6), is firmly connected to its upper end and, on its circumferential surface, in a lower cross-sectional plane, is fitted with locking lugs (11) assigned to a clamping ring (14) and, in an upper cross-sectional plane, is fitted with at least one holding pin (12) assigned to the mounting tool (1);
 - d) an annular seal (13), which rests with its underside on an abutment (8) which projects radially beyond the lower end of the tool guide (10) and, on its upper side, can be acted on axially by the clamping ring (14) pushed onto

the tool guide (10) and, as a result, can have its diameter be enlarged to such an extent that it can be pressed in a sealing manner against the inner circumferential surface of the upper supporting pipe when the clamping ring (14) assumes its clamping position under the locking lugs (11) of the tool guide (10);

- e) the mounting tool (1) has a bell-shaped basic body (17) which can be placed with its upper end fixed against rotation on a drilling string, has an external diameter which is smaller than the internal diameter of the upper supporting pipe, has at its lower edge rotation drivers (16) to which rotation driving surfaces (15) are assigned in the clamping ring (14), and which in its central region has at least one approximately j-shaped slot (19) which is assigned to the at least one holding pin (12) of the tool guide (10) and which has a first vertical driver surface (19a) that rotates the holding pin (12) and therefore the tool guide (10) with its lower sealing sleeve (6) in the anticlockwise direction during rotation of the mounting tool (1), comprises a vertical slot section (19b) permitting axial relative displacement between the basic body (17) and tool guide (10) as far as the form-fitting engagement of the rotation drivers (16) behind the clamping ring driving surfaces (15), and has a second vertical stop surface (19c) which is assigned to the holding pin (12) and limits a rotation in order to brace the seal (15) in a rotational position in which the clamping ring (14) engages under the locking lugs (11) on the tool guide (10).

- 2 Sealing system according to Claim 1, characterized in that the abutment (8) for the seal (13) is formed by an adapter ring (8) fixed to the upper

end of the sealing sleeve (6).

3. Sealing system according to Claim 2, characterized
in that an O-ring (9) is inserted into the adapter
ring (8).
4. Sealing system according to Claim 1, 2 or 3,
characterized in that the clamping ring (14) has a
rim of smaller diameter which is provided with
axial incisions (15) which are open at the top and
form the rotation driving surfaces, in which the
rotation drivers (16) of the mounting tool (1)
engage during its axial displacement with respect
to the tool guide (10).
5. Sealing system according to one of the preceding
claims, characterized in that the j-shaped slot
(19) in the mounting tool (1) has a latching
support (19d) for the holding pin (12) when the
sealing system is transported suspended on the
mounting tool (1).
6. Sealing system according to one of the preceding
claims, characterized in that the j-shaped slot
(19) has a section (19e) which runs out obliquely
downwards in the anticlockwise direction in order
to rotate the mounting tool (1) out of its rotary
connection with the tool guide (10).